CLAIMS

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Currently amended) The method of ~~claim 7~~ claim 45 wherein the protein transduction domain is chosen from the group consisting of HIV-TAT, VP-22, a growth factor signal peptide sequence, Pep-i, and a Drosophila Antp peptide.

9. (Currently amended) The method of ~~claim 7~~ claim 45 wherein the protein transduction domain is an HIV-TAT protein transduction domain.

10. (Cancelled)

11. (Cancelled)

12. (Currently amended) The method of ~~claim 7~~ claim 45 wherein the fusion polypeptide is administered as an implant.

13. (Currently amended) The method of ~~claim 7~~ claim 45 wherein the fusion polypeptide is administered by hydrogel.

14. (Currently amended) The method of ~~claim 7~~ claim 45 the fusion polypeptide is administered to at least one multipotent progenitor cell.

15. (Original) The method of claim 14 wherein the at least one multipotent progenitor cell is implanted into the mammal.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Currently amended) The method of ~~claim 21~~ claim 47 wherein the protein transduction domain is chosen from the group consisting of HIV-TAT, VP-22, a growth factor signal peptide sequence, Pep-1, and a Drosophila Antp peptide.

23. (Currently amended) The method of ~~claim 21~~ claim 47 wherein the protein transduction domain is an HIV-TAT protein transduction domain.

24. (Cancelled)

25. (Cancelled)

26. (Currently amended) The method of ~~claim 21~~ claim 47 wherein the fusion polypeptide is administered as an implant.

27. (Currently amended) The method of ~~claim 21~~ claim 47 wherein the fusion polypeptide is administered by hydrogel.

28. (Currently amended) The method of ~~claim 21~~ claim 47 wherein the fusion polypeptide is administered to at least one multipotent progenitor cell.

29. (Currently amended) The method of ~~claim 21~~ claim 28 wherein the at least one multipotent progenitor cell is implanted into the mammal.

30. (Currently amended) The method of ~~claim 21~~ claim 47 wherein the proteoglycan is aggrecan.

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Currently amended) The method of ~~claim 36~~ claim 49 wherein the protein transduction domain is chosen from the group consisting of HIV-TAT, VP-22, a growth factor signal peptide sequence, Pep-1, and a Drosophila Antp peptide.

38. (Currently amended) The method of ~~claim 36~~ claim 49 wherein the protein transduction domain is an HIV-TAT protein transduction domain.

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (Currently presented) A method of inducing bone formation in a mammal comprising administering an effective amount of a fusion polypeptide consisting of a protein transduction domain and an amino acid sequence selected from the group consisting of an amino acid sequence consisting of SEQ ID NO 1, an amino acid sequence consisting of SEQ ID NO 2, an amino acid sequence consisting of SEQ ID NO 4, ~~SEQ ID NO 5, SEQ ID NO 6,~~ and an amino acid sequence consisting of SEQ ID NO 7, SEQ ID NO 8. ~~and combinations thereof~~.

46. (Cancelled)

47. (Currently amended) A method of inducing proteoglycan synthesis in a mammal comprising administering an effective amount of a fusion polypeptide consisting of a protein transduction domain and an amino acid sequence selected from the group consisting of an amino acid sequence consisting of SEQ ID NO 1, an amino acid sequence consisting of SEQ ID NO 2, an amino acid sequence consisting of SEQ ID NO 4, ~~SEQ ID NO 5, SEQ ID NO 6~~, an amino acid sequence consisting of SEQ ID NO 7, and an amino acid sequence consisting of SEQ ID NO 8 ~~and combinations thereof~~, wherein the proteoglycan concentration prior to said administering step is less than said concentration post said administering step.

48. (Cancelled)

49. (Currently amended) A method of inducing osteoblast differentiation in a progenitor cell, the method comprising administering to the progenitor cell an effective amount of a fusion polypeptide consisting of a protein transduction domain and an amino acid sequence selected from the group consisting of an amino acid sequence consisting of SEQ ID NO 1, an amino acid sequence consisting of SEQ ID NO 2, an amino acid sequence consisting of SEQ ID NO 4, ~~SEQ ID NO 5, SEQ ID NO 6,~~ an amino acid sequence consisting of SEQ ID NO 7, an amino acid sequence consisting of SEQ ID NO 8, ~~and combinations thereof~~, wherein the differentiated osteoblast concentration prior to said administering step is less than said concentration post said administering step.

50. (New) The method of claim 49 wherein the fusion polypeptide is administered as an implant.

51. (New) The method of claim 49 wherein the fusion polypeptide is administered by hydrogel.

52. (New) The method of claim 49 wherein the fusion polypeptide is administered to at least one multipotent progenitor cell.

53. (New) The method of claim 52 wherein the at least one multipotent progenitor cell is implanted into the mammal.